

AIMEE SCHWAB-MCCOY



EDUCATION

- 2015
|
2012
- **Ph.D., Statistics**
University of Nebraska-Lincoln 📍 Lincoln, NE
 - Dissertation: "Beta-Binomial Kriging: An Improved Method for Modeling Spatially Correlated Proportions"
- 2012
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2010
- **M.S., Statistics**
University of Nebraska-Lincoln 📍 Lincoln, NE
 - Thesis: "Evaluating the Teaching Assistant Preparation Course at UNL"
- 2010
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2005
- **B.S., Mathematics**
University of Nebraska-Lincoln 📍 Lincoln, NE
 - Honors: High distinction



ACADEMIC APPOINTMENTS

- 2020
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2017
- **Assistant Professor of Statistics**
Creighton University 📍 Omaha, NE
- 2020
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2019
- **Program Director: Data Science**
Creighton University 📍 Omaha, NE
- 2017
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2015
- **Assistant Professor of Statistics**
Xavier University 📍 Cincinnati, OH
- 2015
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2014
- **Assistant Statistician**
School of Architectural Engineering and Construction, University of Nebraska-Lincoln 📍 Lincoln, NE
- 2015
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2010
- **Graduate Teaching Assistant**
Department of Statistics, University of Nebraska-Lincoln 📍 Lincoln, NE



PEER-REVIEWED ARTICLES

- 2020
- **"Computing in the Data Science Curriculum: A Survey of Faculty Practices, Challenges, and Needs"**
Journal of Statistics Education 📍 Under revision
 - Aimee Schwab-McCoy, Catherine Baker, and Rebecca Gasper

Assistant Professor
of Statistics

Program Director:
Data Science

Department of
Mathematics

Creighton University

CONTACT

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RESEARCH INTERESTS

Statistics and data
science curriculum
and pedagogy

Generalized linear
mixed models (ap-
plications in R)

Spatially correlated
count data

Statistical consulting

Made w/ [pagedown](#) us-
ing Nick Strayer's CV
guide github.com/nstrayer/cv.

Last updated: 2020-07-
11.

- 2019 ● **“Cellular prion protein gene polymorphisms linked to differential scrapie susceptibility correlate with distinct residue connectivity between secondary structure elements”**
Journal of Biomolecular Structure and Dynamics
📍 <https://doi.org/10.1080/07391102.2019.1708794>
• Patricia Soto, India Claflin, Alyssa Bursott, Aimee Schwab-McCoy, and Jason Bartz
- 2019 ● **“The State of Statistics Education Research in Client Disciplines: Themes and Trends Across the University”**
Journal of Statistics Education 📍 <https://doi.org/10.1080/10691898.2019.1687369>
• Aimee Schwab-McCoy
- 2018 ● **“The incidence of nursing students’ perceived stress and burnout levels at a private university in California”**
Journal of Nursing Education 📍 <https://doi.org/10.5430/jnep.v8n10p138>
• Reo J. F. Jones, Margaret M. Hansen, Mahmoud Kaddoura, Aimee Schwab-McCoy, Kirsten Tocchini
- 2018 ● **“Bringing Mainstream Media into the Quantitative Literacy Classroom”**
Shifting Contexts, Stable Core: Advancing Quantitative Literacy in Higher Education
📍 E-ISBN: 9781614443247
• Aimee Schwab-McCoy
- 2017 ● **“Life on an Island: Using Peer Consulting in Applied Statistics Courses”**
CHANCE: Vol. 30, Special Issue on Climate Change
📍 <https://chance.amstat.org/2017/11/life-on-an-island/>
• Aimee Schwab-McCoy
- 2016 ● **“Developing a First-Year Seminar Course in Statistics and Data Science”**
Promoting understanding of statistics about society. Proceedings of the Roundtable Conference of the International Association of Statistics Education (IASE), July 2016, Berlin Germany.
📍 <https://iase-web.org/documents/papers/rt2016/Schwab.pdf>
• Aimee Schwab-McCoy
- 2016 ● **“Emerging Patterns in Multi-Sourced Data Modeling Uncertainty”**
Spatial Statistics: Special Issue on Emerging Patterns
📍 <https://doi.org/10.1016/j.spasta.2016.05.005>
• Alexander Kolovos, Lynette Smith, Aimee Schwab-McCoy, Sarah Gengler, Hwa-Lung Yu
- 2015 ● **“Beta-Binomial Kriging: An Improved Model for Spatial Rates”**
Procedia Environmental Sciences 📍 <https://doi.org/10.1016/j.proenv.2015.07.101>
• Aimee Schwab, David Marx

PRESENTATIONS

Note: Virtual conference presentations can be viewed on my YouTube channel

- 2020 ● **“Moving Backward: Designing an R Ecosystem for Academic Programs”**
Use-R 2020! 📍 Remote (COVID-19)
• Aimee Schwab-McCoy

- 2020 ● **“Is a Consensus Curriculum on the Horizon?”**
UC Berkeley Workshop on Data Science Education Remote (COVID-19)
• Aimee Schwab-McCoy, Catherine Baker, and Rebecca Gasper
- 2020 ● **“Data Science in 2020: Computing, Curricula, and Challenges for the Next 10 Years”**
Symposium on Data Science and Statistics Remote (COVID-19)
• Aimee Schwab-McCoy, Catherine Baker, and Rebecca Gasper
- 2020 ● **“Subsemble Estimation for Spatial Count Data”**
Conference on Statistical Practice Sacramento, CA
• Aimee Schwab-McCoy, Mark May
- 2019 ● **“Toward Interpretable Machine Learning”**
Omaha Women in Machine Learning and Data Science Omaha, NE
• Aimee Schwab-McCoy
- 2019 ● **“Pre-Conceptions of Statistical Inference in Biostatistics”**
University of Nebraska Medical Center Department Colloquium Omaha, NE
• Aimee Schwab-McCoy
- 2019 ● **“Pre-Conceptions of Statistical Inference in Biostatistics”**
Joint Statistical Meetings Denver, CO
• Aimee Schwab-McCoy
- 2019 ● **“Applications of Subsemble Estimation in Multivariate Spatial Models”**
Joint Statistical Meetings Denver, CO
• Mark May, Aimee Schwab-McCoy
- 2019 ● **“Pre-Conceptions of Statistical Inference in Biostatistics”**
US Conference on Teaching Statistics State College, PA
• Aimee Schwab-McCoy
- 2018 ● **“Statistics Education Across the University: A Systematic Review”**
Joint Statistical Meetings Vancouver, BC, Canada
• Aimee Schwab-McCoy
- 2018 ● **“Spatial Simulation and Estimation of Generalized Linear Mixed Models with Non-Normal Data”**
BERD Big Data Methodology Workshop Omaha, NE
• Lynette Smith, Aimee Schwab-McCoy, David Marx
- 2017 ● **“Data-Focused Activities and Lessons in Seminar-Style Introductory Courses”**
US Conference on Teaching Statistics State College, PA
• Aimee Schwab-McCoy, Ming-Wen An, Wissman, Adam Molnar
- 2018 ● **“Life in the Data Deluge: A First-Year Seminar on the Implications of Data Science for Daily Life”**
Joint Mathematics Meetings San Diego, CA
• Aimee Schwab-McCoy

- 2016 ● **“Developing a First-Year Seminar Course in Statistics and Data Science”**
 IASE Roundtable Conference 📍 Berlin, Germany
 • Aimee Schwab-McCoy
- 2015 ● **“Statistical Consulting: Making Connections Across the Curriculum”**
 US Conference on Teaching Statistics 📍 State College, PA
 • Aimee Schwab, Pamela Fellers
- 2016 ● **“Peer Consulting in Undergraduate Statistics Courses”**
 Joint Mathematics Meetings 📍 Seattle, WA
 • Aimee Schwab-McCoy
- 2015 ● **“Beta-Binomial Kriging: An Alternative Model for Spatial Rates”**
 Joint Statistical Meetings 📍 Seattle, WA
 • Aimee Schwab, David Marx
- 2015 ● **“Beta-Binomial Kriging: An Alternative Model for Spatial Rates”**
 Spatial Statistics 2015: Emerging Patterns 📍 Avignon, France
 • Aimee Schwab, David Marx
- 2014 ● **“Spatial Simulation and Estimation of Generalized Linear Mixed Models with Non-Normal Data”**
 METMA-GRASPA Joint Meeting 📍 Turino, Italy
 • Lynette Smith, Aimee Schwab, David Marx
- 2014 ● **“Using the Island to Develop Consulting Skills”**
 Joint Statistical Meetings 📍 Boston, MA
 • Aimee Schwab
- 2014 ● **“Developing New Statistics Instructors and Student Leaders Through Peer Mentoring”**
 CAUSE Webinar 📍 Online webinar
 • Erin Blankenship, Aimee Schwab
- 2013 ● **“Facebook Friend Data: Analyzing Non-Random Samples in the Introductory Course”**
 Joint Statistical Meetings 📍 Montreal, Canada
 • Aimee Schwab
- 2013 ● **“Using StatCrunch Friend Data to Illustrate Consequences of a Non-Random Sample”**
 US Conference on Teaching Statistics 📍 Raleigh, NC
 • Aimee Schwab



GRANTS

- 2020 ● **“Nebraska Institute in Human-Powered AI for Bioimaging”**
 National Science Foundation (NSF 20-503) 📍 Amount: \$45,822 (Under review)
 • Creighton PI: Aimee Schwab-McCoy; Subaward from UNL

- 2019 ● **“Nebraska Center for Modeling, Analysis, Prediction, and Imaging of Data”**
Nebraska EPSCoR RII Pre-Proposal 📍 Amount: \$13,633,045 (Declined)
• PI: Jennifer Clarke (UNL); Co-PIs: Martin Centurion (UNL), Bertrand Clarke (UNL), Mikil Foss (UNL), Adam Larios (UNL), Mahbubal Majumder (UNO), Nathan Pennington (Creighton), Petronela Radu (UNL), Aimee Schwab-McCoy (Creighton), Stephen Scott (UNL)
- 2019 ● **“MAPping Data Science: Establishing an Institute for Meaningful Assessment Practices in Data Science”**
National Science Foundation (NSF 19-549) 📍 Amount: \$434,917 (Declined)
• PI: Aimee Schwab-McCoy; Co-PIs: Catherine Baker, Rebecca Gasper
- 2019 ● **“Applications of Subsemble Estimation in Multivariate Spatial Models”**
Creighton Haddix President's Faculty Research Fund 📍 Amount: \$5,000 (Awarded)
• PI: Aimee Schwab-McCoy
- 2019 ● **“Faculty Development Grant: Introduction to Data Science”**
CURAS Certificate in Research and Scholarship 📍 Amount: \$2,000 (Awarded)
• PI: Aimee Schwab-McCoy
- 2019 ● **“Faculty Development Grant: Biostatistics”**
CURAS Certificate in Research and Scholarship 📍 Amount: \$4,000 (Awarded)
• Co-PIs: Aimee Schwab-McCoy, Andrew Kraemer
- 2018 ● **“Honey Bees in Peril: An investigation of honey bee viral infection dynamics and modeling-implications for Colony Collapse Disorder”**
Haddix Interdisciplinary Project Grant 📍 Amount: \$15,000 (Awarded)
• PI: Carol Fassbinder-Orth; Co-PIs: Andrew Kraemer, Aimee Schwab-McCoy
- 2018 ● **“Exploring Student Understanding and Misconceptions of Statistical Inference in Biostatistics”**
Creighton Scholarship of Teaching and Learning Grant 📍 Amount: \$1,500 (Awarded)
• PI: Aimee Schwab-McCoy
- 2017 ● **“Statistics Education Across the University: A Systematic Review”**
Xavier Wheeler Award 📍 Amount: \$4,000 (Awarded)
• PI: Aimee Schwab-McCoy
- 2016 ● **“Creating a Xavier pilot program to support career specialization and persistence of female students in disciplines with underrepresentation”**
Xavier Women of Excellence Grant 📍 Amount: \$10,000 (Awarded)
• Co-PIs: Laura Wessels, Dena Morton, Aimee Schwab-McCoy, Heidrun Schmitzer



UNDERGRADUATE RESEARCH

- 2019 ● **Subsemble estimation applied to spatial GLMMs**
Creighton University 📍 Student: Mark May
• Apply subsemble estimation for estimating spatial parameters in a generalized linear mixed model (GLMM).

- 2018 ● **Analysis of high dimensional case-control study**
 Creighton University 📍 Student: Jessica Sandcork
- Evaluate resampling-based multiple testing and adaptive Benjamini-Hochberg procedures to test for statistically significant differences between subjects in a small sample case-control study. Used machine learning to adjust for correlation between variables.

SERVICE

- 2020 | 2019 ● **Ratio Studiorum Program**
 Freshman advisor 📍 Creighton University
- Advise first-year students in the Ratio Studiorum Program
- 2020 | 2017 ● **Reviewer**
 Journal reviews 📍 Creighton University
- Journal of Statistics Education, Spatial Statistics
- 2020 | 2018 ● **Reviewer**
 Textbook reviews 📍 Creighton University
- Review proposed and revised textbooks: "Foundations of Statistics with R", "The Analysis of Biological Data", "STAT2: Building Models for a World of Data"
- 2020 ● **Clare Boothe Luce Scholarship Award Committee**
 Member 📍 Creighton University
- Review applications for Clare Boothe Luce tuition and research scholarship
- 2017 | 2016 ● **Quantitative Reasoning Committee**
 Member 📍 Xavier University
- Review and approve course proposals for Quantitative Reasoning Flag in core curriculum
- 2017 | 2016 ● **Hiring Committee**
 Member 📍 Xavier University
- Review and interview candidates for open positions in statistics

AWARDS

- 2019 ● **Best Young Investigator Award**
 Winner 📍 ASA Section on Teaching Statistics in the Health Sciences
- 2014 ● **Best Contributed Paper Award - JSM**
 Winner 📍 ASA Section on Teaching Statistics in the Health Sciences
- 2013 ● **Outstanding Graduate TA Award**
 Honorable Mention 📍 University of Nebraska-Lincoln